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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,833	12/12/2001	Alan Glen Solheim	16-089	6722

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EXAMINER	
PHAN, HANH	

ART UNIT	PAPER NUMBER
2613	

MAIL DATE	DELIVERY MODE
10/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/017,833	SOLHEIM ET AL.	
	Examiner	Art Unit	
	Hanh Phan	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the appeal brief filed on 11/13/2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Egner et al (Pub. No.: US 2003/0099014).

Regarding claims 1, 10, 18, 21, 25 and 33, referring to Figure 1, Egner et al teaches a method of optimizing the performance of a connection in a wavelength switched optical network, comprising:

for all wavelengths available for transporting user signals in said network, storing wavelength performance data in a wavelength performance database (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]);

selecting a path with one or more regenerator sections (i.e., pages 2 and 3, paragraphs [0032]-[0034], pages 5 and 6, paragraphs [0051]-[0053] and page 7, paragraphs [0065]-[0066]); and

assigning a set of wavelengths to the path based on the wavelength performance data (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 2, Egner et al further teaches wherein the step of assigning comprises: (a) for each regenerator section of the path, selecting a wavelength from the wavelength performance database based on connectivity data for the regenerator section available from a topology database; (b) determining a path performance parameter; (c) establishing said connection along the path whenever the path performance parameter is better than a threshold; and (d) otherwise, selecting a further path and repeating steps a) to c) (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 3, Egner et al further teaches the path performance parameter is the Q factor (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 4, Egner et al further teaches the step of determining comprises: identifying all optical devices connected in the path from the topology database;

importing measured performance data for the path and device specifications for the optical devices; and calculating the path performance parameter using the measured performance data and the device specifications (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 5, Egner et al further teaches the wavelength performance data comprises a correspondence between attainable reach for each wavelength available in the network and a plurality of fiber types (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 6, Egner et al further teaches the wavelength performance data further includes launch power-reach information for all wavelengths available in the network (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 7, Egner et al further teaches the step of storing includes grouping all wavelengths available in the network into bins of reach, each bin corresponding to a different range of reach distances, and categorizing the wavelengths within a bin by fiber type (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 8, Egner et al further teaches determining a worst performing wavelength of the set of wavelengths and upgrading the connection by replacing the worst performing wavelength (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 9, Egner et al further teaches the wavelength performance data includes the wavelength natural reach for all wavelengths available in the network for a plurality of fiber types, and the connectivity data includes the length of the regenerator section (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 11, Egner et al teaches further comprising: for a specified regenerator section of the path, modifying operation of a selected wavelength for increasing the reach of the selected wavelength; and controlling operation of all other wavelengths passing through the specified regenerator section for maintaining a respective wavelength performance data for the respective other wavelengths within a respective range (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 12, Egner et al further teaches the step of modifying comprises adjusting a tunable parameter of a device of the specified regenerator section (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 13, Egner et al further teaches the tunable parameter is one of gain, dispersion or both (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 14, Egner et al further teaches the step of modifying comprises controlling the launch power of the selected wavelength (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 15, Egner et al further teaches the step of assigning comprises mapping a transmitter to the wavelength according to reach performance of the transmitter (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 16, Egner et al further teaches the step of assigning comprises mapping a receiver to the wavelength according to the performance of the receiver (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 17, Egner et al teaches further comprising replacing the selected wavelength with a different wavelength from a different transmission band from that of the selected wavelength (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 19, Egner et al further teaches the step of measuring comprises, for each node of the network: determining all free wavelengths that are not used for live traffic exiting the node; for each the free wavelength, setting up a test connection between a transmitter at the node and a next receiver; and measuring the performance parameter for all the test connections (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 20, Egner et al further teaches storing the performance parameter in a measurement database (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 22, Egner et al further teaches the path performance parameter includes the cost of the path and the Q factor of the path (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 23, Egner et al teaches further comprising: a measurement database for storing measured performance data for each regenerator section of the network; and an interface between the measurement database and a plurality of optical devices of the network for transmitting the measured performance data from the devices to the measurement database (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 24, Egner et al teaches further comprising a wavelength exerciser for setting-up test connections on all regenerator sections, for each

wavelength unused on the regenerator section to populate the measurement database with measured data (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 26, Egner et al teaches further comprising collecting a plurality of further performance data from an optical device connected in the path (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 27, Egner et al further teaches the optical device is an optical amplifier and the further performance data is one or more of span gain/loss, power level and reflections level (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 28, Egner et al further teaches the optical device is an optical amplifier and the further performance data is one or both of the Raman power and Raman gain (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 29, Egner et al further teaches the optical device is a transmitter and the further performance data is the launch power (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 30, Egner et al further teaches the optical device is a receiver and the further performance data is one or more of the sensitivity level, BER, Q factor, and eye opening (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 31, Egner et al further teaches the optical device is a receiver and the further performance data is the link chromatic dispersion (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 32, Egner et al further teaches the measured performance data include power levels and noise levels measured in each the respective measurement

point for each wavelength traveling along the path (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 34, Egner et al further teaches the step of modifying comprises adjusting the launch power of the specified wavelength until a performance parameter of the regenerator section is within an operational range (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 35, Egner et al further teaches the step of modifying comprises changing the gain/loss of the specified wavelength (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Regarding claim 36, Egner et al further teaches the step of controlling includes selecting the other wavelengths to provide greater wavelength spacing (i.e., Fig. 1, pages 2-7, paragraphs [0031]-[0066]).

Response to Arguments

4. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

HANH PHAN
PRIMARY EXAMINER